Gold in the News

The 'Gold Rush Challenge'

BB International (BBI) is one of the leading manufacturers of high quality immunogold reagents for research and diagnostic applications. They manufacture gold colloid to a range of specifications to suit most applications in the rapid test industry, routinely manufacturing colloid between the size ranges of 1-250nm. BBI have just have launched a competition called the '**Gold Rush Challenge**' to try and encourage scientists to send their papers into BBI for projects which have used BBI gold colloids and conjugates. There are 3 prizes of £500 worth of Life Science products for the best applications which have been published. Closing date for entries is 31st March 2005. For further details contact: Dylan Herbert at BB International dylanherbert@britishbiocell.co.uk and www.bb-international.com

Polymer-Compatible Gold Nanoparticles on the Market

NanoHorizons, a company focused on nanotechnology applications in the drug discovery, microelectronics and health care industries, has recently announced the availability of concentrated, polymer-compatible gold nanoparticles in research and pilot production volumes. With prices for small quantities ranging from $100 to $400 per litre, NanoHorizons claim that the polymer manufacturing process compatibility of the nanoparticles will enable manufacturers to create a vast array of plastic consumer and industrial products with built-in antimicrobial properties. Examples of potential products include plastic storage containers, food packaging materials, plastic gloves, and clothing such as odor-free, microbial-free shoes, socks, and hats. NanoHorizons gold nanoparticles are 10-30 nanometers (nm) in size. For further information see www.nanohorizons.com

Skin-Like Electronic Circuits Using Gold

Future use of electroactive polymers, sensitive skins for robotics and medical devices are likely to need electrical interconnects that can sustain large and reversible stretching. A recent publication by Lacour et al (IEEE Electron Device Letters, Vol. 25, No. 4, 2004) has highlighted the potential to prepare stretchable electrical conductors of 25-nm thick gold films on elastomeric substrates. By preshaping a gold stripe to a wave on the elastomer substrate, the stripe is reversibly stretchable with little change in resistance.

Laser Cure for Gold Inks

A news story on www.optics.org has reported the exciting work of Swiss-US team that has developed a technique for writing conductive microstructures on glass using a 'fountain pen' filled with gold nanoparticle 'ink'.

A laser technique for fabricating gold microstructures could provide a new powerful way to create miniature resistors or conductive tracks for flexible electronics, providing an attractive alternative to other manufacturing techniques such as ink-jet printing. The so-called 'fountain pen' method unveiled by the team deposits gold stripes as thin as 5 microns and illuminating the stripes with an Argon ion laser (488-515nm) not only solidifies them, but also allows their electrical resistivity to be customized by changing the power and scanning speed of the laser. The team prepares the 'ink' using 2-4 nm diameter gold particles (30 wt% and 2 vol%) in toluene. See http://www.optics.org/articles/news/10/7/13/1 for more information.